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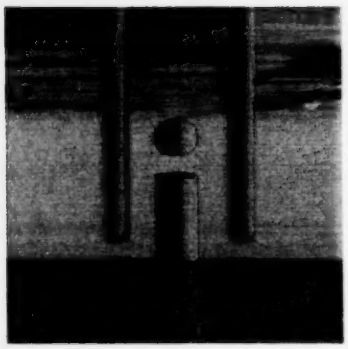
The Canadian Productivity Review

Revisions to Canada and United States Annual Estimates of Labour Productivity in the Business Sector, 2003 to 2006



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Symbols

The following standard symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
p	preliminary
r	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
E	use with caution
F	too unreliable to be published

The Canadian Productivity Review

The Canadian Productivity Review is a series of applied studies that address issues involving the measurement, explanation, and improvement of productivity. Themes covered in the review include, but are not limited to, economic performance, capital formation, labour, prices, environment, trade, and efficiency at both national and provincial levels. The Review publishes empirical research, at different levels of aggregation, based on growth accounting, econometrics, index numbers and mathematical programming. The empirical research illustrates the application of theory and techniques to relevant public policy issues.

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All papers in **The Canadian Productivity Review** go through institutional review to ensure that they conform to Statistics Canada's mandate as a government statistical agency and adhere to generally accepted standards of good professional practice.

The papers in the series often include results derived from multivariate analysis or other statistical techniques. It should be recognized that the results of these analyses are subject to uncertainty in the reported estimates.

The level of uncertainty will depend on several factors: the nature of the functional form used in the multivariate analysis; the type of econometric technique employed; the appropriateness of the statistical assumptions embedded in the model or technique; the comprehensiveness of the variables included in the analysis; and the accuracy of the data that are utilized. The peer group review process is meant to ensure that the papers in the series have followed accepted standards to minimize problems in each of these areas.

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Abstract

This paper examines the impact of the revisions to labour productivity estimates and related variables covering the revision cycle of the National Accounts from 2003 to 2006 for Canada and from 2004 to 2006 for the United States.

Revisions to Canada and United States Annual Estimates of Labour Productivity in the Business Sector, 2003 to 2006

1 Introduction

In this paper, we compare recent revisions to the labour productivity estimates in Canada and the United States.[1] These regular revisions to preliminary estimates extend back four years.

Revisions to labour productivity estimates have been made (in June 2007) in Canada in order to incorporate the latest available gross domestic product (GDP) estimates published by the National Economic and Financial Accounts. These revisions relate to the last four years (2003 to 2006). Recent productivity data are produced on the basis of preliminary GDP estimates, which are eventually revised when additional and more precise information sources become available for the National Accounts.

In August 2007, revisions were also made to labour productivity in the United States but over a shorter term (three last years), from 2004 to 2006.

2 Revision process

The estimates of labour productivity (output per hour worked) that are produced by the Canadian Productivity Accounts are subject to two types of revisions. Please take note that revisions for this year are only of the first type.

Revisions of the first type are a series of annual revisions in the gross domestic product (GDP) that go back over a four-year period (Carpentier 2006). With this revision cycle, a preliminary estimate of GDP first released in year t is revised annually over the four subsequent years (t+1 to t+4) as more detailed and accurate data become available to the System of National Accounts (SNA).

When first released, estimates of GDP at the industrial sector level come from projecting past estimates using a small number of readily measured series (for example, the GDP in Taxi and Limousine Services is projected off the Survey of Employment, Payrolls and Hours [SEPH] estimate of employment growth in these industries). The industry estimates are gradually supplemented by far more detailed and accurate data that are obtained from surveys such as the Annual Survey of Manufactures and the Unified Enterprise Survey, and from administrative tax records that become available after a lag of one or two years. Preliminary estimates of GDP that are calculated from final demand are also projected the first time from sources that are eventually replaced by more comprehensive information.

In addition, the labour productivity estimates for year t are revised in year t+1 as new information becomes available to improve the first estimates of employment and hours worked that are made using the Labour Force Survey (LFS) and SEPH. These revisions improve the estimates of hours worked because more precise measures of holidays and other non-random events are used (Maynard 2005). Revisions also occur if the employment estimates for the non-commercial sector obtained from the Public Institutions Division and produced with SEPH are revised, since the business sector estimate is obtained residually after removing the non-commercial sector from the total economy.

Revisions of the second type occur less frequently, about once or twice every 10 years. Historical revisions of the SNA are occasionally carried out to eliminate breaks in some series, to modify classification standards (for example, the movement from the Standard Industrial Classification to the North American Industry Classification System) or to

1. These estimates are derived from the expenditure side of the National Accounts valued at market prices.

introduce conceptual and methodological changes. These revisions of the second type occur when the SNA updates the method used for measuring certain industries, sometimes because of changes in the international standards to which it adheres (SNA93). For example, in 2001, Statistics Canada included software expenditures as investment for the first time.[2] In addition, the adoption of Fisher chain indices instead of fixed base Laspeyres indices has introduced revisions to GDP and, therefore, a historical revision to the labour productivity estimates.

Historical revisions also occur in the employment and hours worked data when the LFS is occasionally re-benchmarked against data from the most recent Census of Population.

3 Impact of revisions on labour productivity

In this section, we compare recent revisions to the labour productivity estimates for the business sector in Canada and the United States.

Revisions to labour productivity estimates have been made (in June 2007) in Canada in order to incorporate the latest available gross domestic product (GDP) estimates published by the National Economic and Financial Accounts.[3] These revisions relate to the last four years (2003 to 2006). The revisions to estimates of labour productivity, GDP and volume of hours worked, which extend back to 1999, are presented in Tables 1 to 3. These tables show a picture of the evolution of the estimates over the last seven revision rounds since 2001. It should be noted that the revision cycles of the most recent estimates are not yet completed. This is the case for the 2004-to-2006 estimates for Canada and the 2005 and 2006 ones in the United States. The estimates produced during the first four-year revision cycle appear with the footnote marker "1." Other revisions reflect revisions of the second type outlined above.

Table 4 of this paper shows the impact of revisions on the respective labour productivity performance of Canada and the United States for two periods—1981 to 2000 and 2000 to 2006. It should be noted that the latter period is less than a business cycle in length and covers the years since the end of the previous peak in productivity growth that was observed in 2000. It also corresponds to a period (except for 2000 to 2002) when only preliminary estimates of GDP are available. The former period, however, contains mainly estimates that are past the preliminary revision cycle. It essentially covers two business cycles and therefore provides a better comparison of differences in long-term trends between Canada and the United States.[4] Productivity estimates of short-term changes are generally more volatile than estimates of changes over the long term.

3.1 Impact of Canadian revisions

In general, the revisions of the Canadian productivity figures for the period from 2003 to 2006 that were published in *The Daily* on June 12, 2007, resulted in almost no change from previous estimates. For businesses on the whole, the revisions during this period had the impact of reducing the rate of growth in Canadian labour productivity for 2004 and 2006, and increasing it for 2003 and 2005. The magnitude of these revisions ranged from -0.3% to 0.4%. For example, for 2006, productivity growth in Canadian businesses was revised downward from 1.2% to 1.0%. The 2003 productivity growth in Canada was revised up from 0.0% to 0.3%.

These revisions of Canadian data tend to cancel each other out. As a result, they had no impact on the average gap in productivity between Canada and the United States during the post-2000 period.

3.2 Impact of American revisions

However, the growth rate of labour productivity in American businesses that was published in *News* of the Bureau of Labor Statistics on August 7, 2007, was revised downward for each of the last three years, from 2004 to 2006.

2. The United States had made this change in 1999.
3. Recent productivity data are produced on the basis of preliminary gross domestic product estimates, which are eventually revised when additional and more precise information becomes available to the National Accounts.
4. Quarterly measures of productivity in the Canadian business sector are now available from 1981 onward. Prior to this publication, the data were available only from 1987.

For this whole period, the revised estimates show that productivity increased only 2.0% on average, 0.3 percentage point less than the previously published estimates indicated.

Thus, the average annual rate of productivity in the United States reached 2.9% in 2004 (instead of 3.1%), 2.0% in 2005 (instead of 2.1%) and 1.0% in 2006 (instead of 1.7%). The revised productivity increase in 2006 was the smallest since 1995 (+0.2%). After peaking at 4.1% in 2002, annual productivity growth in the United States has been decelerating.

Since 2002, the United States has systematically revised downwards its preliminary estimates of labour productivity. On average, revisions have reduced productivity growth by -0.8 percentage point on an annual basis.

3.3 Analysis of the gap between Canada and the United States

After revision, for the first time since 2000, productivity growth for 2005 was higher in Canadian businesses than in American businesses. For 2005, the revisions made productivity growth in Canada rise from 2.1% to 2.5%, which is a greater rate than the 2.0% revised growth rate in the United States during the same year (+2.0%). In Canada, it was the strongest annual performance since 2000.

After posting a superior performance in 2000[5] relative to that of American businesses, productivity in Canadian businesses deteriorated during the next four years (from 2001 to 2004). An improvement was recorded in 2005, and productivity growth in Canadian businesses surpassed that of American businesses. Finally, the productivity growth gap between the two countries disappeared in 2006. For 2006, productivity growth in Canadian businesses was revised down from 1.2% to 1.0%, while it passed from 1.7% to 1.0% in the United States. Both countries experienced a slowdown in their productivity growth in 2006.

Over the 2000-to-2006 period, the average annual growth rate was 1.0% in Canada and 2.7% in the United States (see Table 4); U.S. productivity growth was almost three times higher than that of its Canadian counterpart. During that period, real GDP growth was similar on both sides of the border, but hours worked increased at a faster pace in Canada. More precisely, GDP growth in Canada was 2.5% on average per year from 2000 to 2006, while the hours worked increased by 1.5%. In comparison, the U.S. GDP grew by 2.6% on average while hours worked declined by 0.1% during the same period.

It should be noted that the period from 2000 to 2006 covers much less than a full business cycle. In the early 1990s, Canada also lagged behind the United States in productivity growth, particularly during the recessionary period, but ended up at approximately the same point by the end of the decade.

It is also important to note that the annual productivity differences reported over the period from 2000 to 2006 are based on preliminary data that are still subject to revision. In addition, the United States has systematically revised its preliminary estimates of productivity downward since 2002. It is important to take into account this additional margin of error when analysing data of recent years.

Since 1998, the Canada–United States gap has generally shrunk, following revisions to the preliminary data. The main revision made to the Canadian productivity estimate in 1999 is almost entirely due to revisions in GDP. Almost half the revision in 2000 comes from this source.[6] During this period, two changes were made to the Canadian System of National Accounts, which increased the rate of growth of output and therefore of labour productivity. First, software expenditures were capitalized (the United States had introduced this in 1999). Second, new surveys were gradually introduced, which were associated with the Project to Improve Provincial Economic Statistics whose economic survey coverage had been extended.[7] During this period, the productivity program also revised its estimate of hours worked, downward.[8]

5. Productivity growth gap in favour of Canada was 0.5 percentage point in 2000 (Table 1).
6. The remainder came from a revision to the labour statistics.
7. The gross domestic product revisions in 1999 and 2000 came from new benchmarks of manufacturing activity derived from the Project of Improve Provincial Economic Statistics, upward revisions in exports, and the incorporation of software as an investment rather than as an intermediate expenditure. In addition, the productivity program fully integrated its output measure with that produced by the Income and Expenditure Accounts Division.
8. The revisions in hours worked in 2000 came from new information on the methodology actually followed by the Labour Force Survey for the year 2000 but not for other years. The information resulted in an upward adjustment in holidays in that year.

Over a longer period (1981 to 2000), there is a small gap in productivity growth between Canada and the United States (0.3 percentage point per year), some of which may arise from slightly different methods used to calculate the growth in labour inputs (Maynard 2007). For this period, productivity has grown at an average annual rate of 1.6% in Canada compared with 1.9% in the United States. The recent revisions (in June 2007 for Canada and August 2007 for the United States) to the productivity estimates had virtually no effect on average annual productivity growth in Canada and the United States for that period.

4 Conclusion

All things considered, the 2003-to-2006 revisions of gross domestic product (GDP) in Canada (and the 2004-to-2006 revisions of GDP in the United States) resulted in a narrowing of the gap in productivity growth. Since the most recent revisions applied only to the period after 2000, they have had little effect on Canada–United States differences over the last two decades—from 1981 to 2000. During this period, Statistics Canada's estimates of productivity growth have consistently shown an annual gap of 0.3 percentage point between Canada and the United States. For a more extensive discussion of the significance of the difference and the causes behind it, see Statistics Canada (2007).

5 Statistical tables

Table 1
Labour productivity, business sector, annual change, Canada and United States

	1999	2000	2001	2002	2003	2004	2005	2006
	percent							
Canada								
First estimates published for 2001 (4th quarter), *The Daily release of March 14, 2002*	2.4 [1]	1.5 [1]	1.2 [1]	...	...	...	...	...
After the revisions round in 2001 (1st quarter), *The Daily release of June 14, 2002*	2.9 [1]	2.1 [1]	0.8 [1]	...	...	...	...	...
First estimates published for 2002 (4th quarter), *The Daily release of March 14, 2003*	2.9 [1]	2.1 [1]	0.8 [1]	2.2 [1]	...	...	...	...
After the revisions round in 2002 (1st quarter), *The Daily release of June 12, 2003*	2.9 [1]	3.1 [1]	1.2 [1]	1.8 [1]	...	...	...	...
First estimates published for 2003 (4th quarter), *The Daily release of March 12, 2004*	3.3	3.8 [1]	1.0 [1]	1.9 [1]	0.1 [1]	...	...	...
After the revisions round in 2003 (1st quarter), *The Daily release of June 11, 2004*	3.3	3.9 [1]	1.4 [1]	2.3 [1]	0.4 [1]	...	...	...
First estimates published for 2004 (4th quarter), *The Daily release of March 10, 2005*	3.3	3.6	1.7 [1]	2.5 [1]	0.2 [1]	0.0 [1]	...	...
After the revisions round in 2004 (1st quarter), *The Daily release of June 9, 2005*	2.8	3.4	1.5 [1]	2.1 [1]	0.2 [1]	0.0 [1]	...	...
First estimates published for 2005 (4th quarter), *The Daily release of April 26, 2006*	3.2	3.4	1.1	1.4 [1]	0.4 [1]	0.0 [1]	2.2 [1]	...
After the revisions round in 2005 (1st quarter), *The Daily release of June 8, 2006*	3.2	3.4	1.1	1.4 [1]	0.0 [1]	0.3 [1]	2.3 [1]	...
First estimates published for 2006 (4th quarter), *The Daily release of March 12, 2007*	3.3	3.6	1.1	1.4	0.0 [1]	0.3 [1]	2.1 [1]	1.2 [1]
After the revisions round in 2006 (1st quarter), *The Daily release of June 12, 2007*	3.3	3.6	1.1	1.3	0.3 [1]	0.0 [1]	2.5 [1]	1.0 [1]
Difference, original and actual estimate [2]	1.9	2.2	-0.1	-0.9	0.2	0.0	0.3	-0.2

See footnotes at the end of the table.

Table 1 – continued

Labour productivity, business sector, annual change, Canada and United States

	1999	2000	2001	2002	2003	2004	2005	2006
	percent							
United States								
First estimates published for 2001 (4th quarter), Bureau of Labor Statistics release of May 31, 2002	2.5 [1]	3.4 [1]	2.0 [1]	...	...	...	...	...
After the revisions round in 2001 (1st quarter), Bureau of Labor Statistics release of August 9, 2002	2.6 [1]	3.0 [1]	1.1 [1]	...	...	...	...	...
First estimates published for 2002 (4th quarter), Bureau of Labor Statistics release of June 4, 2003	2.6 [1]	3.0 [1]	1.1 [1]	4.8 [1]	...	...	...	...
After the revisions round in 2002 (1st quarter), Bureau of Labor Statistics release of August 7, 2003	2.5 [1]	3.1 [1]	2.0 [1]	5.3 [1]	...	...	...	...
First estimates published for 2003 (4th quarter), Bureau of Labor Statistics release of March 4, 2004	2.9	2.9 [1]	2.2 [1]	4.9 [1]	4.5 [1]	...	...	...
After the revisions round in 2003 (1st quarter), Bureau of Labor Statistics release of August 10, 2004	2.9	2.9 [1]	2.5 [1]	4.3 [1]	4.5 [1]	...	...	...
First estimates published for 2004 (4th quarter), Bureau of Labor Statistics release of March 3, 2005	2.9	2.9	2.5 [1]	4.3 [1]	4.5 [1]	4.0 [1]	...	...
After the revisions round in 2004 (1st quarter), Bureau of Labor Statistics release of August 9, 2005	2.9	2.8	2.5 [1]	4.0 [1]	3.9 [1]	3.4 [1]	...	...
First estimates published for 2005 (4th quarter), Bureau of Labor Statistics release of March 7, 2006	3.0	2.8	2.5	4.0	4.1 [1]	3.5 [1]	2.7 [1]	...
After the revisions round in 2005 (1st quarter), Bureau of Labor Statistics release of August 8, 2006	3.0	2.9	2.6	4.1	3.8 [1]	3.1 [1]	2.3 [1]	...
First estimates published for 2006 (4th quarter), Bureau of Labor Statistics release of March 6, 2007	3.0	2.9	2.6	4.1	3.8	3.1 [1]	2.1 [1]	1.7 [1]
After the revisions round in 2006 (1st quarter), Bureau of Labor Statistics release of August 7, 2007	3.0	2.9	2.6	4.1	3.8	2.9 [1]	2.0 [1]	1.0 [1]
Difference, original and actual estimate [2]	-0.1	-1.3	0.6	-0.7	-0.7	-1.1	-0.7	-0.7

1. This estimate covers the four-year period of annual revisions that arise from the gross domestic product revision cycle. In Canada, the System of National Accounts revisions are usually made available with the release of the first quarter, while in the United States the revisions are published with the preliminary estimates of the second quarter.
2. For some years, the revision process reflects more than the short-term revision round. For example, for 1999 and 2000, methodological changes were implemented for both hours worked and gross domestic product, which had the effect of exaggerating the impact of short-term revisions.

Source(s): Statistics Canada; Bureau of Labor Statistics.

Table 2
Real gross domestic product, business sector, annual change, Canada and United States

	1999	2000	2001	2002	2003	2004	2005	2006
	percent							
Canada								
First estimates published for 2001 (4th quarter), *The Daily release of March 14, 2002*	6.0 [1]	5.2 [1]	1.2 [1]	...	...	...	...	...
After the revisions round in 2001 (1st quarter), *The Daily release of June 14, 2002*	6.7 [1]	5.4 [1]	0.9 [1]	...	...	...	...	...
First estimates published for 2002 (4th quarter), *The Daily release of March 14, 2003*	6.7 [1]	5.4 [1]	0.9 [1]	3.8 [1]	...	...	...	...
After the revisions round in 2002 (1st quarter), *The Daily release of June 12, 2003*	6.9 [1]	6.3 [1]	1.3 [1]	3.4 [1]	...	...	...	...
First estimates published for 2003 (4th quarter), *The Daily release of March 12, 2004*	6.9	6.3 [1]	1.3 [1]	3.4 [1]	1.5 [1]	...	...	...
After the revisions round in 2003 (1st quarter), *The Daily release of June 11, 2004*	6.9	6.3 [1]	1.8 [1]	3.6 [1]	1.7 [1]	...	...	...
First estimates published for 2004 (4th quarter), *The Daily release of March 10, 2005*	6.9	6.3	1.8 [1]	3.6 [1]	1.7 [1]	2.9 [1]	...	...
After the revisions round in 2004 (1st quarter), *The Daily release of June 9, 2005*	6.5	6.1	1.6 [1]	3.2 [1]	1.6 [1]	3.1 [1]	...	...
First estimates published for 2005 (4th quarter), *The Daily release of April 26, 2006*	6.6	6.0	1.6	3.2 [1]	1.6 [1]	3.1 [1]	2.8 [1]	...
After the revisions round in 2005 (1st quarter), *The Daily release of June 8, 2006*	6.6	6.0	1.6	3.1 [1]	1.4 [1]	3.3 [1]	3.0 [1]	...
First estimates published for 2006 (4th quarter), *The Daily release of March 12, 2007*	6.6	6.0	1.6	3.1	1.4 [1]	3.3 [1]	3.0 [1]	2.7 [1]
After the revisions round in 2006 (1st quarter), *The Daily release of June 12, 2007*	6.6	6.0	1.6	3.0	1.4 [1]	3.2 [1]	3.2 [1]	2.6 [1]
Difference, original and actual estimate	1.9	0.7	0.4	-0.8	-0.1	0.3	0.4	-0.1

See footnotes at the end of the table.

Table 2 – continued

Real gross domestic product, business sector, annual change, Canada and United States

	1999	2000	2001	2002	2003	2004	2005	2006
	percent							
United States								
First estimates published for 2001 (4th quarter), Bureau of Labor Statistics release of May 31, 2002	4.6 [1]	4.6 [1]	0.9 [1]	...	...	...	...	...
After the revisions round in 2001 (1st quarter), Bureau of Labor Statistics release of August 9, 2002	4.7 [1]	4.1 [1]	-0.1 [1]	...	...	...	...	...
First estimates published for 2002 (4th quarter), Bureau of Labor Statistics release of June 4, 2003	4.7 [1]	4.1 [1]	-0.1 [1]	2.7 [1]	...	...	...	...
After the revisions round in 2002 (1st quarter), Bureau of Labor Statistics release of August 7, 2003	4.7 [1]	4.1 [1]	-0.1 [1]	2.7 [1]	...	...	...	...
First estimates published for 2003 (4th quarter), Bureau of Labor Statistics release of March 4, 2004	5.1	3.9 [1]	0.1 [1]	2.3 [1]	3.7 [1]	...	...	...
After the revisions round in 2003 (1st quarter), Bureau of Labor Statistics release of August 10, 2004	5.1	3.9 [1]	0.3 [1]	1.8 [1]	3.8 [1]	...	...	...
First estimates published for 2004 (4th quarter), Bureau of Labor Statistics release of March 3, 2005	5.1	3.9	0.3 [1]	1.8 [1]	3.8 [1]	5.1 [1]	...	...
After the revisions round in 2004 (1st quarter), Bureau of Labor Statistics release of August 9, 2005	5.1	3.9	0.3 [1]	1.5 [1]	3.4 [1]	4.7 [1]	...	...
First estimates published for 2005 (4th quarter), Bureau of Labor Statistics release of March 7, 2006	5.1	3.9	0.3	1.5	3.4 [1]	4.8 [1]	4.0 [1]	...
After the revisions round in 2005 (1st quarter), Bureau of Labor Statistics release of August 8, 2006	5.1	3.9	0.3	1.5	3.1 [1]	4.4 [1]	3.7 [1]	...
First estimates published for 2006 (4th quarter), Bureau of Labor Statistics release of March 6, 2007	5.1	3.9	0.3	1.5	3.1	4.4 [1]	3.7 [1]	3.8 [1]
After the revisions round in 2006 (1st quarter), Bureau of Labor Statistics release of August 7, 2007	5.1	3.9	0.3	1.5	3.1	4.2 [1]	3.6 [1]	3.1 [1]
Difference, original and actual estimate	0.3	-1.7	-0.6	-1.2	-0.6	-0.9	-0.4	-0.7

1. This estimate covers the four-year period of annual revisions that arise from the gross domestic product revision cycle. In Canada, the System of National Accounts revisions are usually made available with the release of the first quarter, while in the United States the revisions are published with the preliminary estimates of the second quarter.

Source(s): Statistics Canada; Bureau of Labor Statistics.

Table 3
Hours worked, business sector, annual change, Canada and United States

	1999	2000	2001	2002	2003	2004	2005	2006
	percent							
Canada								
First estimates published for 2001 (4th quarter), *The Daily release of March 14, 2002*	3.5	3.7	0.0	...	...	...	...	...
After the revisions round in 2001 (1st quarter), *The Daily release of June 14, 2002*	3.8	3.1	0.1	...	...	...	...	...
First estimates published for 2002 (4th quarter), *The Daily release of March 14, 2003*	3.8	3.1	0.1	1.5	...	...	...	...
After the revisions round in 2002 (1st quarter), *The Daily release of June 12, 2003*	3.8	3.1	0.1	1.5	...	...	...	...
First estimates published for 2003 (4th quarter), *The Daily release of March 12, 2004*	3.6	2.2	0.4	1.4	1.5	...	...	...
After the revisions round in 2003 (1st quarter), *The Daily release of June 11, 2004*	3.6	2.2	0.4	1.4	1.3	...	...	...
First estimates published for 2004 (4th quarter), *The Daily release of March 10, 2005*	3.6	2.5	0.1	1.1	1.5	2.8	...	...
After the revisions round in 2004 (1st quarter), *The Daily release of June 9, 2005*	3.6	2.5	0.1	1.1	1.5	3.0	...	...
First estimates published for 2005 (4th quarter), *The Daily release of April 26, 2006*	3.2	2.7	0.5	1.6	1.3	3.1	0.6	...
After the revisions round in 2005 (1st quarter), *The Daily release of June 8, 2006*	3.2	2.7	0.5	1.6	1.3	3.1	0.6	...
First estimates published for 2006 (4th quarter), *The Daily release of March 12, 2007*	3.2	2.4	0.5	1.6	1.4	2.9	1.0	1.5
After the revisions round in 2006 (1st quarter), *The Daily release of June 12, 2007*	3.2	2.4	0.5	1.6	1.4	3.1	0.7	1.5
Difference, original and actual estimate [1]	-0.1	-1.4	0.5	0.1	-0.1	0.3	0.1	0.0

See footnotes at the end of the table.

Table 3 – continued

Hours worked, business sector, annual change, Canada and United States

	1999	2000	2001	2002	2003	2004	2005	2006
	percent							
United States								
First estimates published for 2001 (4th quarter), Bureau of Labor Statistics release of May 31, 2002	2.0	1.2	-1.1	...	...	...	...	...
After the revisions round in 2001 (1st quarter), Bureau of Labor Statistics release of August 9, 2002	2.0	1.1	-1.3	...	...	...	...	...
First estimates published for 2002 (4th quarter), Bureau of Labor Statistics release of June 4, 2003	2.0	1.1	-1.3	-2.0	...	...	...	...
After the revisions round in 2002 (1st quarter), Bureau of Labor Statistics release of August 7, 2003	2.1	1.0	-2.1	-2.5	...	...	...	...
First estimates published for 2003 (4th quarter), Bureau of Labor Statistics release of March 4, 2004	2.1	1.1	-2.1	-2.5	-0.8	...	...	...
After the revisions round in 2003 (1st quarter), Bureau of Labor Statistics release of August 10, 2004	2.1	1.1	-2.2	-2.4	-0.6	...	...	...
First estimates published for 2004 (4th quarter), Bureau of Labor Statistics release of March 3, 2005	2.1	1.1	-2.2	-2.4	-0.6	1.2	...	...
After the revisions round in 2004 (1st quarter), Bureau of Labor Statistics release of August 9, 2005	2.1	1.2	-2.2	-2.4	-0.5	1.3	...	...
First estimates published for 2005 (4th quarter), Bureau of Labor Statistics release of March 7, 2006	2.0	1.1	-2.1	-2.4	-0.7	1.3	1.3	...
After the revisions round in 2005 (1st quarter), Bureau of Labor Statistics release of August 8, 2006	2.0	1.1	-2.2	-2.5	-0.7	1.3	1.4	...
First estimates published for 2006 (4th quarter), Bureau of Labor Statistics release of March 6, 2007	2.0	1.1	-2.2	-2.5	-0.7	1.3	1.6	2.1
After the revisions round in 2006 (1st quarter), Bureau of Labor Statistics release of August 7, 2007	2.0	1.1	-2.2	-2.5	-0.7	1.3	1.6	2.1
Difference, original and actual estimate [1]	-0.4	-0.2	-1.1	-0.5	0.1	0.1	0.3	0.0

1. For some years, the revision process reflects more than the short-term revision round. For example, for 1999 and 2000, methodological changes were implemented for both hours worked and gross domestic product, which had the effect of exaggerating the impact of short-term revisions.

Source(s): Statistics Canada; Bureau of Labor Statistics.

Table 4

Average annual growth of labour productivity, business sector, Canada and United States, 1981 to 2006

	Canada	United States
	percent	
1981 to 2000	1.6	1.9
2000 to 2006	1.0	2.7

Source(s): Statistics Canada, 2007, "Labour productivity, hourly compensation and unit labour cost, first quarter 2007." *The Daily*, June 12 (Canadian data); Bureau of Labor Statistics, 2007, "Productivity and costs, second quarter 2007." *NEWS*, September 6 (United States data).

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